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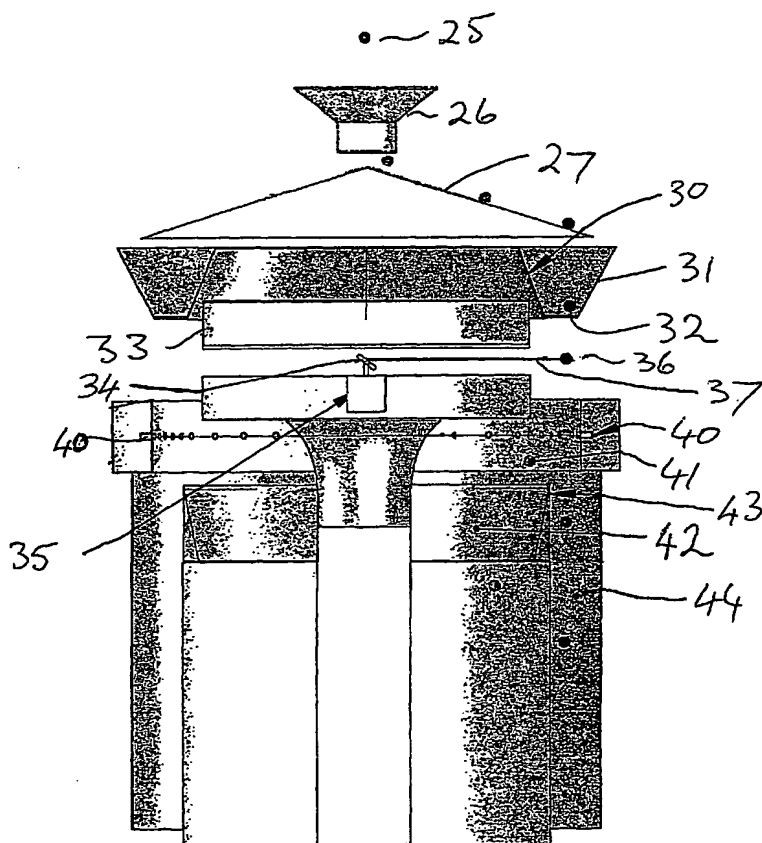
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(54) Title: **SORTING APPARATUS AND METHODS**



(57) Abstract: There is provided sorting apparatus wherein a particulate product stream (25) passes a concentrator (26) to feed product onto a conical dispersion plate (27) which delivers the product evenly in an annular mono-layer to a collimator comprising inner (30) and outer (31) product guides to produce, an annular, vertically directed product flow (32). Located within the annulus of the product flow (32) is a detector assembly comprising an upper detector and optics box (33) beneath which is mounted for rotation a beam splitting mirror (34) driven by a motor (35) and scanning product in the annular detection area (36). The product passing through the detection area (36) is bombarded with a source and the reflected or transmitted intensity signal (37) is then measured by a detector in the detector and optics box (33). The classified product is removed from the product stream via a rejector (40) operable in response to control means directed by the detector in the detector and optics box (33). The classified product (41) passes into a chute (42) to one side of a separation plate (43). The remaining product continues unhindered into the chute (44).



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